This hurricane moved steadily northwestward after the end of June, entered the Gulf of Mexico, and turned westward to the Mexican coast a short distance south of the mouth of the Rio Grande, where it crossed the coastline and disappeared, July 6th.

A fuller discussion of this hurricane will appear in the

July Review.

Fog.—June was, as usual, a bad month for fog over the northern part of the Atlantic. Fogginess was reported on more than half the days of the month in several 5° squares between the Grand Banks and Cape Hatteras; on 7 to 13 days over the middle portion of the routes eastward to the 30th meridian and north of the 40th parallel; and on a few days in the region east of that meridian. Fog was reported on 1 or 2 days over midocean between 35° and 40° N., and also on 2 days near the American coast southeast of Hatteras, below latitutde 35°.

Trans-Atlantic aviation.—Two noteworthy airplane crossings of the north Atlantic were successfully accomplished in June 1933. The first, in less than 24 hours, and establishing a speed record, was by the veteran American aviator James Mattern, who crossed from New York to a point near Oslo. Charts VIII and IX, for June 3 and 4, show the weather conditions attending this flight.

On June 11th two officers of the Spanish Army—Captain Barberan and Lieutenant Collar—took off from Tablada, Spain, with their objective a nonstop flight to Cuba. They landed on June 12 at Camaguey, having successfully completed the longest trans-Atlantic flight which so far has been made. Charts X and XI, for June 11 and 12 are presented to show the conditions attending this extraordinary venture.

It is noted with regret that these courageous flyers were lost a few days later on their further attempt to cross the Gulf of Mexico from Habana to Mexico City.

## OCEAN GALES AND STORMS, JUNE 1933

													_
Vessel	Voyage		Position at time of lowest barometer		Gale	Time of lowest	Gale	Low- est ba-	Direc- tion of wind	Direction and force of wind	Direc- tion of wind	Direction and high-	Shifts of wind near time of
	From-	То—	Latitude	Longi- tude	began	barom- eter	ended	rom- eter	when gale began	at time of lowest barometer	when gale ended	est force of wind	lowest barom- eter
NORTH ATLANTIC OCEAN			. ,					Za ab aa					
Independence Hall, Am. S.S.	New York	Le Havre	40 22 N	70 20 W	June 1	Noon, June 1.	June 1	Inches 29. 70	NNE	NE,7	NE	NE,8	Steady.
Washington, Am.S.S Elmsport, Am.S.S	Port Arthur New Orleans.	New York Bremen	35 28 N 46 05 N	75 12 W 29 40 W	do May 31	do 6 p., 1	June 2	29. 70 29. 60	N NW	N, 8 NW, 8	NE NW	N, 8 NW, 8	N-NE. Steady.
Livenza, Ital.S.S.	Gibraltar	New York	41 15 N	54 26 W 26 09 W	June 2 June 3	10 a., 2 8 p., 3	June 5	29. 67 29. 49	SW	SW, 8 SW, 7	N. WNW.	SW.8 W,9	SW-N. SSW-SW-W.
Black Tern, Am.S.S Quaker City, Am.S.S	Antwerp Dundee	Baltimore Boston	58 07 N	16 10 W	do	10 p., 3	June 4	29. 67	8	<b>−.</b> 7	8	l S. 9	NW-W.
Excelsior, Am.S.S Statendam, Du.S.S	Casablanca New York	Rotterdam	1 39 36 N 1 40 27 N	49 00 W   72 45 W	June 7 June 10	12 mdt, 7    4 a., 10	June 8   June 10	29.77	SW	SW.8   NW.11	NNW W	SW.8 NW.11	SW-NNW.   Var.
Caledonia, Br.S.SLiberty Glo, Am.S.S	Glasgow Antwerp	New York Charleston	55 30 N 49 24 N	8 00 W 6 27 W	June 17 June 18	12mdt, 17 6 a., 18	June 18 June 20	28. 94 29. 66	WNW_ NW	WNW, 9 NW, 7	NW WNW.	WNW, 9 —, 8	Steady. Do.
Mar Cantabrico, Span.	Heulva	Philadelphia.		56 48 W	do	7 p., 18	June 18	30.04	sw	SW,'9	sw	sw, 9	Во.
Caledonia, Br.S.S	Glasgow	New York	55 08 N	21 22 W	June 19		June 19		NW	NINE	NW	NW, 8	Steady.
Motocarline, Belg.M.S Darien, Pan.S.S	Aruba Puerto Bar-	Rotterdam Galveston	46 59 N 15 55 N	15 45 W 88 00 W	June 20 June 23	2 a., 21 3 a., 23	June 22 June 23	30. 04 29. 69	NW SE	NW, 8 SE, 8	NW SE	NW, 8 SE, 8	Steady.
Persier, Belg.S.S	rios. Rio de Ja- neiro.	Antwerp	9 04 N	27 20 W	June 25	4 a., 26	June 26	29.86	W	NNW, 7	w	WNW, 7	NNW-W.
Do	do	do	14 56 N	24 52 W	June 27	4 p., 27	June 30	29. 92	NNE	NNE, 7	NE	NE, 8	Steady.
Nerissa, Br.S.S	Demerara Cardiff	Port of Spain Newfoundl'd.		62 05 W 42 40 W	June 28	8 p., 27 8 p., 28	June 27 June 29	29.81 29.72	NE	ENE, 8 SW, 8	ESE NW	ENE, 8 SW, 8	NE-ENE. SW-WSW.
Gulfcrest, Am.S.S. Chateau Thierry, U.S.	New York Cristobal	Las Piedras San Juan	13 17 N 14 35 N	69 40 W 73 00 W	June 29	6 a., 29 10 p., 29_	June 30	29. 10 29. 64	E	SE, 12 SE, 8	SE	E, 12 SE, 8	NE-E-SE. NNE-SE.
A.T. Minnesotan, Am.S.S	do	New York	16 45 N	75 <b>4</b> 5 W	June 30	2 p., 30.		29, 78	NE	ENE, 9	ENE.	ENE, 9	NE-ENE.
Eastern Sun, Am.S.S Mobile City, Am.S.S	Los Angeles New York	Philadelphia Colon	1 15 50 N	76 10 W	do	3 p., 30.	do	29.00 29.68	NE	NW, 12 E, —	SE	NW, 12 SE, 9	NNW-SW-8. E-SE-S.
NORTH PACIFIC OCEAN	New TOLK	Colon	10 45 1	10 00 11				25.00	E	. E, —	D	1 511, 5	L-3L-3.
	Manila	Los Angeles	36 15 N	124 42 W	June 2	7 p.,	June 3	29. 65	ssw	NE, 10	SE	NE, 10	ENE-N.
Fernhill, Nor.M.S	do	do	26 57 N	130 35 E	do	June 3	i	² 29. 61	ssw	NNE, 8	NE	NNE, 8	SW-W-NNE.
Sangstad, Nor.M.S Ogura Maru, Jap.M.S	Los Angeles San Luis.	Yokohama	34 10 N 36 04 N	167 40 E 169 26 E	June 4 June 5	7 a., 5 4 p., 5	June 7 June 5	29, 44 29, 45	SE	SSE S, 6.	NW WSW	SSE, 8 SE, 8	SSE-W-NW. SE-S-SW.
Irisbank, Br.M.S	Calif. San Francis-	Manila	23 27 N	137 52 E	June 15	1 p., 15	June 15	29. 79	ssw		sw.,	SW, 8	SSW-SW.
Steel Exporter, Am.S.S.	co. Hawaiian	Balboa	13 47 N	102 00 W	do	4 a., 15	do	29. 65	NE	· ·	sw	SE, 8	NE-E-SE.
Texas, Am.S.S.	Islands. Philippine	San Francis-	33 45 N	151 20 E	June 16	4 a., 17	June 17	29. 31	SSE	SSE, 8	w	SW, 8	SE-SW.
Pres. Jackson, Am.S.S	Islands. Honolulu	co, Yokohama	34 52 N	152 51 E	June 17	5 a., 17.	do	29. 11	SSE	SSW, 7	NW	s, 8	S-SW.
Hakubasan Maru, Jap.S.S.	Yokohama	Los Angeles	44 23 N	165 52 E	June 19		June 22	29. 32	SSE	sw, 8	w	sw, 8	2 points.
Grays Harbor, Am.S.S.	Philippine Islands.	do	39 37 N	174 24 E	June 28	2 p., 28	June 28	29. 50	s	SSW, 9	W	ssw, 9	ssw-sw.
Makura, Br.S.S	Papeete	San Francis-	37 17 N	122 56 W	June 29	4 a., 30	June 30	29. 87	NNW -	NW, 8	NW	NW, 8	

<sup>&</sup>lt;sup>1</sup> Position approximate. <sup>2</sup> Barometer uncorrected.

## NORTH PACIFIC OCEAN, JUNE 1933

## By WILLIS E. HURD

Atmospheric pressure.—The weather over the greater part of the North Pacific Ocean during June 1933 was notably under the dominance of anticyclonic conditions. Several depressions were observed in Far Eastern waters, where the lowest average pressure of the month occurred,

and several appeared over and south of the Aleutians, especially during the early days and a part of the last decade of the month. Many, however, were noted in the Bering Sea, and it was here and over Alaska that the shallow average center (St. Paul 29.90 and Point Barrow 29.88 inches) of low pressure for the extra-tropical region occurred. Departures from the normal pressures over the ocean were mostly small, as may be seen in the table herewith.